



# **Hour 8 - Hazard Communication**

- What is Hazard Communication?
- Scope and Applicability
- The Written HAZCOM Program
- Material Safety Data Sheets (MSDS)
- Employee Information & Training



About 32 million workers  
are potentially exposed to  
1 or more chemical hazards

With an estimated  
575,000  
chemical products in  
existence,  
and hundreds of new  
ones  
introduced each year ...





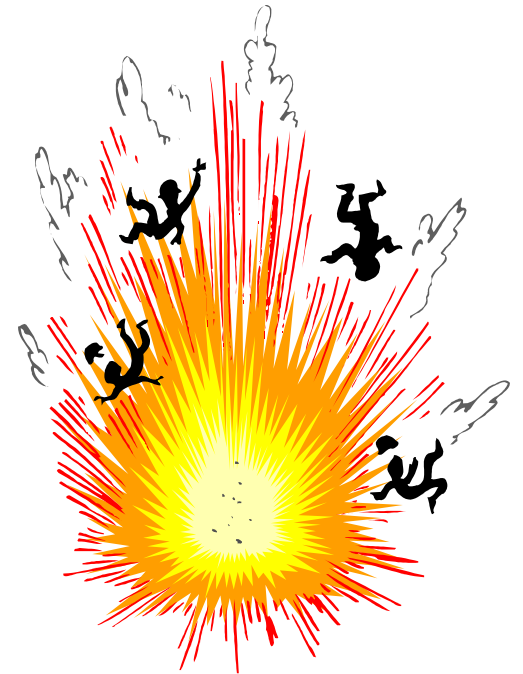
Chemical exposure may cause

or contribute to:

- Heart ailments
- Kidney and lung damage
- Sterility
- Cancer
- Burns
- Rashes

Some chemicals may be safety hazards

- with the potential to cause fires, explosions and other serious accidents



With this in mind, OSHA has issued a rule called  
“Hazard Communication”.

## **What is Hazard Communication?**

It is a standard that establishes uniform requirements to make sure **the hazards of all**

**chemicals**

- imported,
- produced,
- or used in U.S. workplaces **are evaluated**

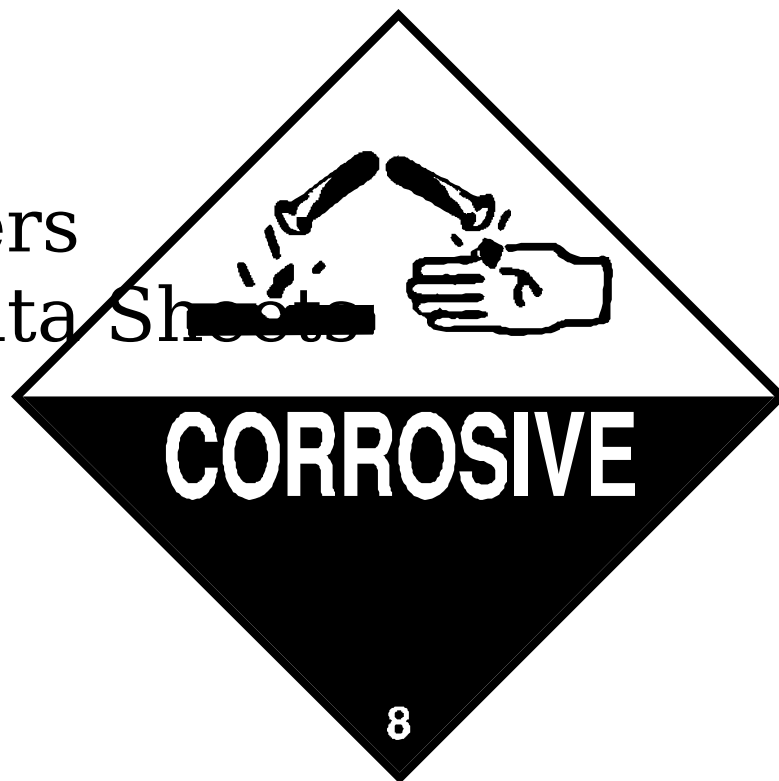
**and**

this hazard **information is transmitted**

Chemical manufacturers and importers must convey information they have learned to employers by means of:

- Labels on containers
- Material Safety Data Sheets

Also, all MSDS'ed employers must have a hazard communication program to get this info to their employees through labels, MSDS's and



# Hazard Communication

Scope and Applicability

**HAZCOM** Ensures:

- **Employers** receive information they need

- **Employers** can inform & train employees properly

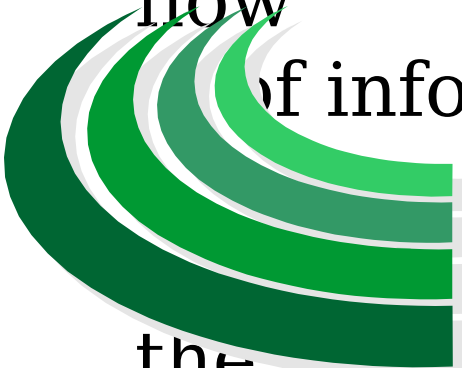
- **Employers** can design and implement employee protection programs

**Employees** can participate in

# Hazard Communication

Differs from other OSHA health rules  
as it  
covers **all** hazardous chemicals

The rule incorporates a “downstream  
flow  
of information”



the primary responsibility to  
generate and disseminate this

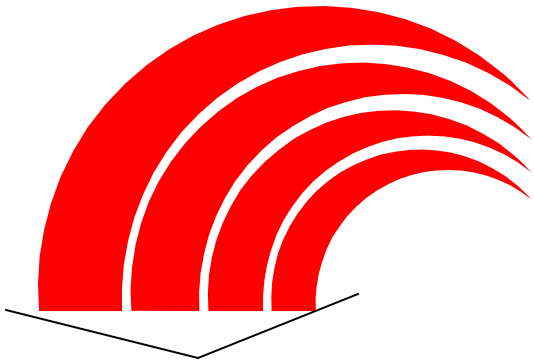
- chemical producers have

# Hazard Communication

## *Downstream Flow of Information*

### Chemical Manufacturers/Importers

- Determine the hazards of each product



### Chemical Manufacturers/Importers/Distributors:

- Communicate the hazard information and associated measures downstream to customers through labels and MSDS





# **Hazard Communication**

## ***Downstream Flow of Information***

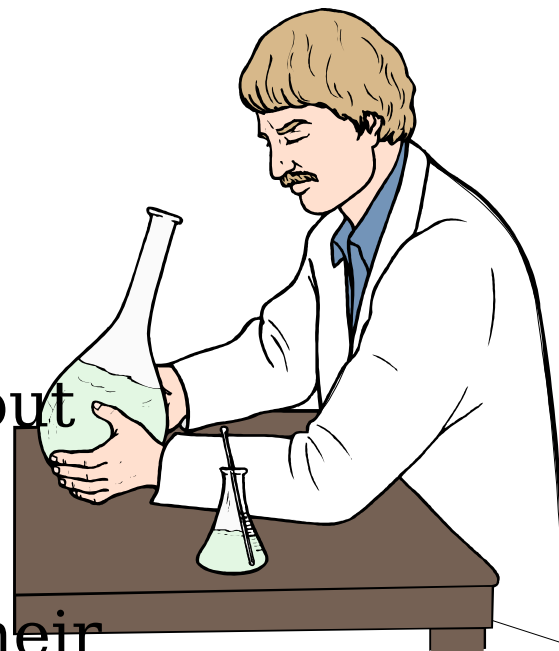


### **Employers:**

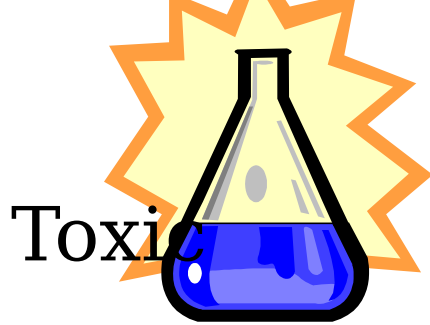
- Identify and list hazardous chemicals in their workplaces
- Obtain MSDS's and labels for each hazardous chemical
- Develop and implement a written hazard communication (HAZCOM) program
- Communicate hazard info to their

# Chemical Manufacturers & Importers Must:

- Review scientific evidence about the hazards of chemicals they produce or import
- Report found information to their employees & employers who distribute or use their products
- Those that evaluate chemicals are responsible for the results of the hazard determinations they perform
  - Each chemical must be evaluated for its potential
    1. Adverse health effects **and**
    2. Pose physical hazards (i.e., flammability)



Chemicals listed in one of these documents  
are considered hazardous in  
all cases:



**Chemical**  
**Agents in the**  
American

**29 CFR 1910, Subpart Z,**

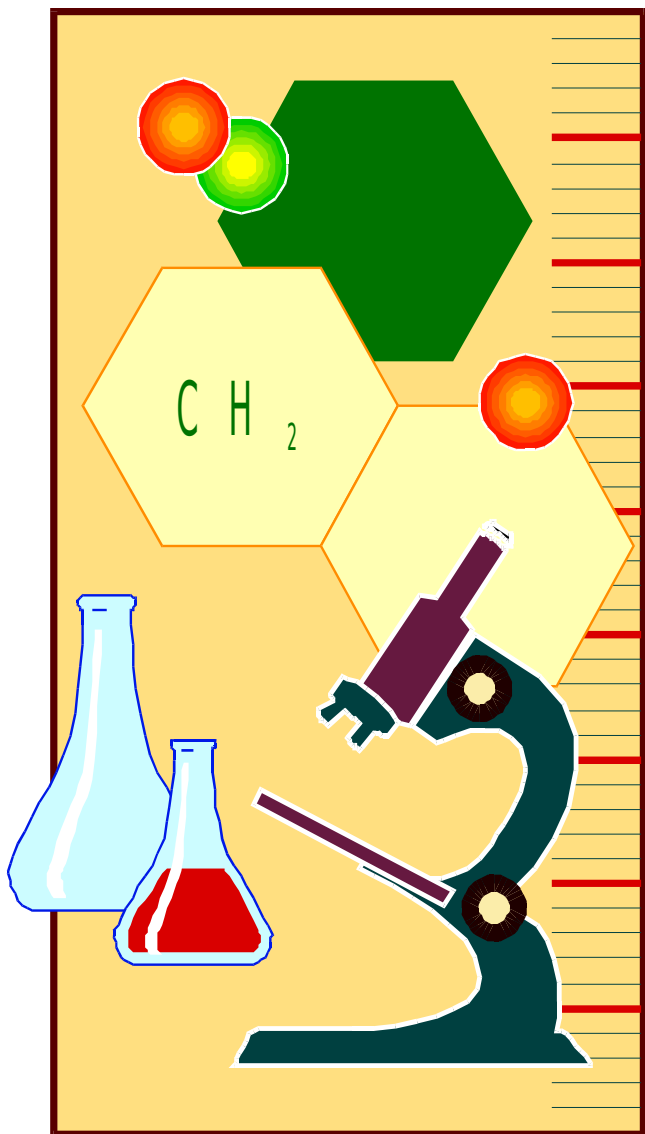
and Hazardous Substances

**Threshold Limit Values for**

**Substances & Physical**

**Work Environment,**

Conference of Governmental



Chemicals found to be a suspect, or confirmed, carcinogen must be reported as such in the:

National Toxicology Program (NTP)

**Annual Report on Carcinogens**

International Agency for Research on Cancer (IARC)  
**Monographs**

# The Written HAZCOM Program

Employers must:

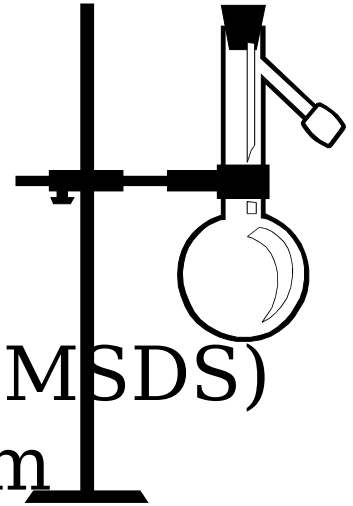
- Develop
- Implement
- Maintain

At the workplace, a **written** comprehensive hazard communication (HAZCOM) program

# The Written HAZCOM Program

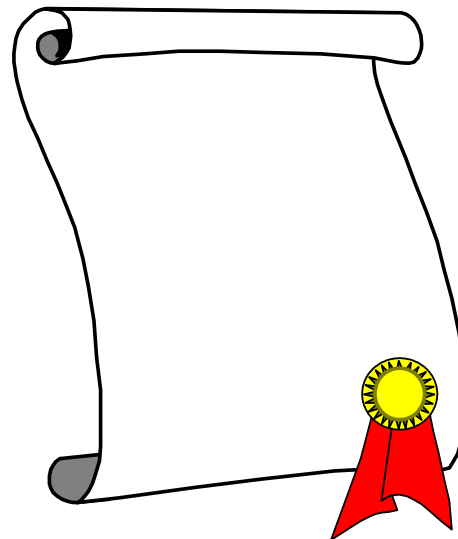
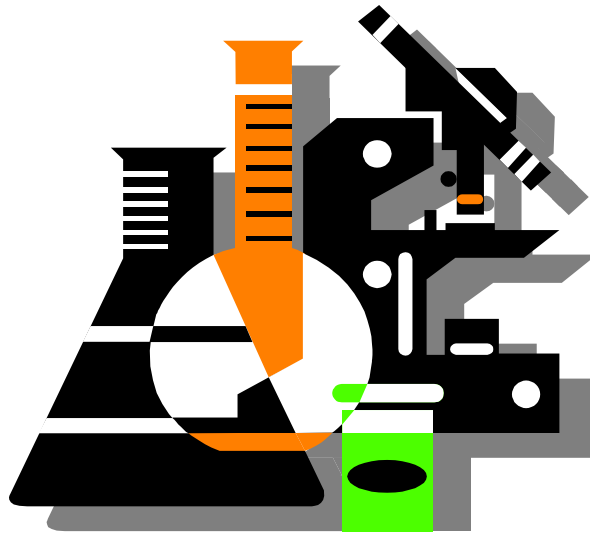
Must include provisions for:

- Container labeling
- Collection & availability of material safety data sheets (MSDS)
- An employee training program
- A list of hazardous chemicals in each work area
- The means the employer will use to inform employees of the hazards of non-routine tasks (example: how to clean reactor vessels, etc.)
- The hazards of chemicals in unlabeled piping



# The Written HAZCOM Program

- Does not have to be lengthy or complicated
- Must be available to employees, their design representatives, OSHA and NIOSH



# The Written HAZCOM Program

Labels & Other Forms of  
Warning

Chemical manufacturers, importers, and  
distributors

must be sure that **containers of  
hazardous chemicals**

leaving the workplace are

- **Labeled, tagged or marked**  
with

- the **identity of the chemicals**

- **appropriate hazard warnings &**

- **name & address of the**

**manufacturer**



# The Written HAZCOM Program

Labels & Other Forms  
of Warning



In the workplace, each  
container  
must be labeled, tagged

- the identity of hazardous chemicals contained therein <sup>or</sup> marked with:
- hazard warnings appropriate for employee protection

# The Written HAZCOM Program

Labels & Other Forms of

- ~~Warning~~ Must be legible
- Must be prominently displayed
- Must be in English (or other languages,  
if necessary or desired)
- Can be any type of:
  - message,
  - words
  - pictures
  - or
  - symbol

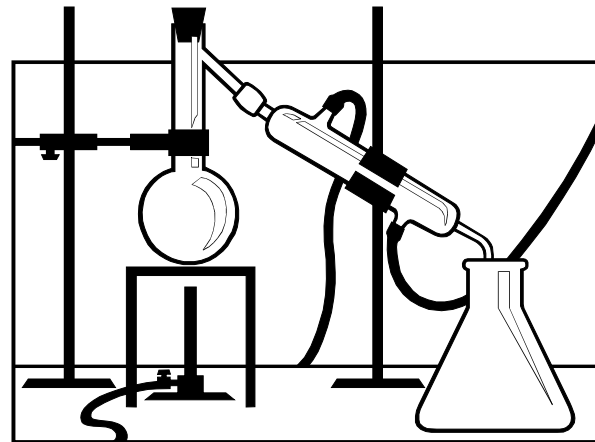


that conveys the hazard

# The Written HAZCOM Program

Exemptions to In-Plant Container Labeling A

- Employers can post signs or placards that convey the hazard information if there a number of stationary containers in a work area with similar contents and hazards



# Exemptions to In-Plant Container Labeling Are:

- Employers can substitute various types of SOPs, process sheets, batch tickets, blend tickets, and similar written materials for container labels on **stationary process equipment** if they contain the **same** information and are readily available to employees in the

# **Material Safety Data Sheets** **(MSDS)**

Chemical manufacturers and importers must:

- Develop an MSDS for each hazardous chemical they produce or import
- Provide the MSDS automatically at the time of the initial shipment of a hazardous chemical to a distributor or user

# **Material Safety Data Sheets** **(MSDS)**

Distributors must:

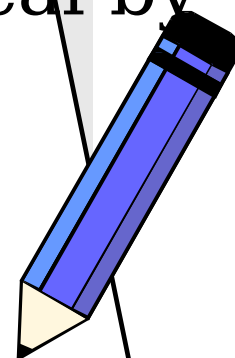
- Ensure employers receive an MSDS for all hazardous chemicals sent to them

Employers must:

- Make MSDS's readily accessible to their employees
- Locate them close to the workers who will need

# **Material Safety Data Sheets**

- Must be in English
- Must include info regarding the specific chemical identity of the hazardous chemical
- Identify the chemical by common name
  - Provide info on the physical & chemical characteristics of the



# **Material Safety Data Sheets**

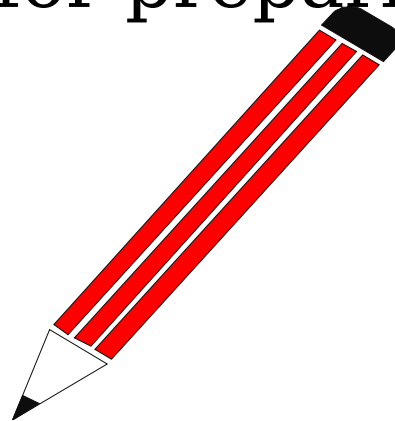
- Must include info on known acute & chronic health effects of the chemical & related health info
- Give exposure limits
- State whether chemical is considered to be a carcinogen by NTP, IARC or OSHA





Must also give info on:

- Precautionary measures in **Material Safety Data Sheets** using the chemical
- Emergency and first-aid procedures and
- Identify the organization responsible for preparing the sheet



What does a typical  
Material Safety Data  
Sheet look like?



**MSDS**

# **List of Hazardous Chemicals**

- Employers must prepare a list of all hazardous chemicals in the workplace
- When completed, employers must check the list against collected MSDS's on file
- If no MSDS has been received for a chemical on file, the employer must write to the supplier, manufacturer, or importer to get it
- If employers do not get the MSDS within a reasonable period of time, they should contact the nearest OSHA office

# Employee Education and

## Training

Employers must establish a training and information program for employees exposed to hazardous conditions in their work area at the time of initial assignment, whenever a new hazard is introduced into their work area.



# Employee Education and Training

At a minimum, discussion topics must include:

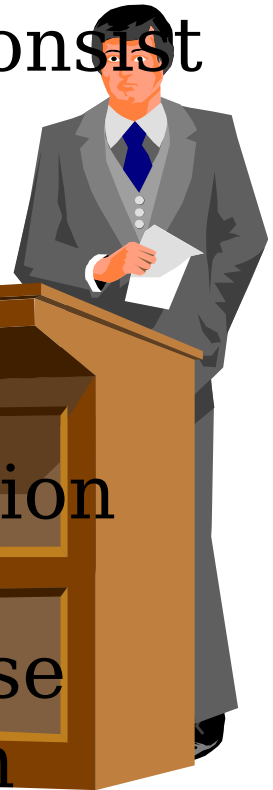
- Existence of the HAZCOM standard and the requirements of the standard
- Components of the HAZCOM program in the employees' workplace
- Where the employer keeps the written HAZCOM procedures, chemical lists, and



# Employee Education and Training

The employee training plan must consist of the following:

- How the HAZCOM program is implemented in that workplace
- How to read & interpret information on labels and the MSDS
- How employees can obtain and use the available hazard information



# Employee Education and Training

The employee training plan must also consist of:

- The hazards of chemicals in the work area  
(discussed either as individual chemical hazard  
or by hazard categories - such as “flammability”)
- Measures employees can do to protect themselves  
from the hazards

# Employee Education and Training

The employee training plan must also consist

- Methods and observations -- such as visual appearance or smell -- workers can use to detect the presence of a hazardous chemical to which they may be exposed



# **In Summary**

HAZCOM is going to be a continuing program at your facility.

**Compliance is not a “one shot deal”.**

In order to have a successful program, it will be necessary to:



**Assign responsibility**  
for both the initial and  
ongoing activities  
that must be undertaken  
to comply with the  
HAZCOM rule.

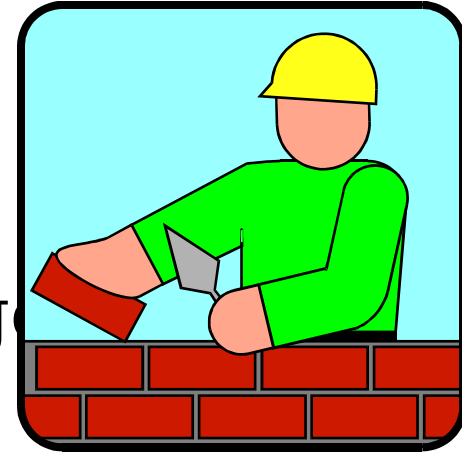
Identify responsible employees early and involve them in development of the action plan.



Evaluate the effectiveness of the HAZCOM plan by involving affected employees.

Success depends on commitment at every level of the organization.

This is particularly true for HAZCOM ... where success requires a change in behavior.



Employers must understand the program and to it for success. Employees must be motivated by the people presenting the info to them.



Become familiar with Hazard Communication Standard (HCS)

The standard is long and some parts are technical.

But the concepts are simple.

The HCS requires information to be prepared and transmitted regarding all hazardous chemicals. It covers both physical and health hazards (including lung damage, cancer, etc.)

# **Checklist for** **Compliance**

Use this checklist to ensure compliance with HCS:

- Obtain a copy of the rule.
- Read and understand the requirements.
- Assign responsibility for tasks.
- Prepare an inventory of chemicals.
- Ensure containers are labeled.
- Obtain an MSDS for each chemical.
- Prepare a written program.
- Make MSDSs available to workers.
- Conduct employee training.
- Establish procedures to maintain the current program.

The OSHA compliance officer will ask some of these questions to assess the adequacy of the program:

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**Does a list** of the hazardous chemicals exist in the work area or at a central location?

**Are methods** the employer uses to inform employees of the hazards of non-routine tasks outlined?

**Are employees** informed of the hazards associated with chemicals contained in unlabeled pipes in work areas?

**On multi-employer** work sites, has the employer provided other employers with information about labeling systems and precautionary measures the other employers have employees exposed to initial employer's chemicals?

**Is the written program** made available to employees and their designated representatives?

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If your program adequately addresses the measures for communicating info to employees in your workplace and provides answers to these basic questions, you will be in compliance with the rule.



## HOUR 8 QUIZ

HAZCOM program must

1. The Hazard Communication Standard for an employee

(HCS) establishes uniform requirements to make sure the hazards of some

False \_\_\_\_\_

chemicals are evaluated and the hazard information about those chemicals

data sheets must be in

transmitted to workers and managers

language most employee

exposed to the chemicals.

facility - but may also

True \_\_\_\_\_ False \_\_\_\_\_

False \_\_\_\_\_

2. Under the concept of a "downstream flow of information" under the HCS,

information provided in an

employers must do all of the following

training program

except:

include:

a. Identify & list hazardous chemicals

employers keep discarded

3. The written

include provisions

training program.

True \_\_\_\_\_

4. Material safety

at least the

understand in a

be in English.

True \_\_\_\_\_

5. Employer

HCS education and

discussion must

a. Where

# **Hour 8 Quiz - Answers**

- 1. False. The HCS establishes uniform requirements for all chemicals - not some of them.
- 2. C.
- 3. True.
- 4. False. It must be in English. It may be in another language as appropriate.
- 5. B.